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Congenital Heart Disease

INCIDENCE AND CLINICAL PRESENTATION OF KOMMERELL DIVERTICULUM AND ANEURYSM

Poster Contributions
Poster Hall B1
Saturday, March 14, 2015, 3:45 p.m.-4:30 p.m.

Session Title: The Vasculature in Congenital Heart Disease
Abstract Category: 10. Congenital Heart Disease: Adult
Presentation Number: 1150-320

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Background: There are limited data on incidence of Kommerell diverticulum (KD) and aneurysm (KA). We aimed to report the incidence and clinical presentation of KD and KA; and determine risk factors for development of KA.

Methods: The Mayo Clinic radiology database was retrospectively analyzed to identify pts with aberrant subclavian artery from 1990-2014. Images were analyzed by two independent blinded reviewers to determine presence of KD and KA and clinical data was reviewed.

Results: Demographic and clinical data are shown (Table). 863 pts with aberrant subclavian artery were identified. Incidence of KD was 121/863 (14%) and KA was 28/863 (3%). 61% of KD pts were symptomatic including dysphagia (52%), dyspnea (34%), atypical chest pain (27%) and cough (26%). KA was present in 28/121 pts (23%). Esophageal spasm (p =0.001) and thoracic aortic aneurysm (p = 0.01) was more common in KA than KD. Univariate risk factors for KA formation were left aortic arch (AA) (p = 0.02); abdominal aortic aneurysm (p = 0.03); thoracic aortic aneurysm (TAA) (p = 0.001); esophageal spasm (p = 0.0003); and atypical chest pain (p = 0.03). Multivariate risk factors for KA formation were TAA (R = 0.33, OR = 20, p = 0.003) and left AA (R = 0.33, OR = 3, p = 0.02).

Conclusion: This is the largest reported study on incidence and clinical presentation of pts with KD and KA. Common presenting symptoms were dysphagia, disordered sleep, dyspnea, atypical chest pain, and cough. Pts with KD as well as TAA and left AA should be screened for subsequent KA formation.

	All pts with KD	KD alone	KA	p
	(n = 121)	(n = 93)	(n = 28)	
Demographics				
Age (years)	50 ± 22	48 ± 22	57 ± 25	NS
Male	50 (41%)	41 (44%)	9 (32%)	NS
CAD	14 (11%)	10 (11%)	4 (14%)	NS
Previous MI	5 (4%)	4 (4%)	1 (4%)	NS
PVD	6 (5%)	5 (5%)	1(4%)	NS
AAA	5 (4%)	2 (2%)	3 (11%)	0.08
TAA	5 (4%)	1 (1%)	4 (14%)	0.01
HTN	48 (40%)	36 (39%)	12 (43%)	NS
HLP	43 (36%)	30 (32%)	13 (46%)	NS
Diabetes	13 (11%)	10 (11%)	3 (11%)	NS
Smoking	29 (24%)	21 (23%)	8 (28%)	NS
Connective tissue disorder	4 (3%)	3 (3%)	1 (4%)	NS
Anatomical Presentation				
Right aortic arch with left ASA	73/121 (60%)	60/93 (65%)	13/28 (46%)	0.1
Left aortic arch with right ASA	47/121 (39%)	32/93 (34%)	15/28 (54%)	0.08
Clinical Presentation				
Symptomatic Patients	74/121 (61%)	54/93 (58%)	20/28 (71%)	0.0001
Symptoms				
Dysphagia	39 (52%)	30 (56%)	9 (45%)	NS
Dyspnea	25 (34%)	20 (37%)	5 (25%)	NS
Atypical Chest Pain	20 (27%)	12 (22%)	8 (40%)	NS
Chronic cough	19 (26%)	13 (24%)	6 (30%)	NS
Recurrent respiratory infections	7 (9%)	6 (11%)	1 (5%)	NS
Hoarseness	6 (8%)	3 (6%)	3 (15%)	NS
Choking spells	6 (8%)	3 (6%)	3 (15%)	NS
Upper extremity claudication	5 (7%)	4 (7%)	1 (5%)	NS
Esophageal spasms	5 (7%)	0 (0%)	5 (25%)	0.001
Wheezing	4 (5%)	4 (7%)	0 (0%)	NS
Weight Loss	3 (4%)	3 (6%)	0 (0%)	NS

KD, Kommerell diverticulum; KA, Kommerell aneurysm; CAD, coronary artery disease; MI, myocardial infarction; PVD, peripheral vascular disease; AAA, abdominal aortic aneurysm; thoracic aortic aneurysm; HTN, hypertension; HLP, hyperlipidemia; ASA, Aberrant subclavian artery